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10/628,565	07/29/2003	Karsten Schulz	13909-026001 / 2002P00222	4843
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EXAMINER KARDOS, NEIL R				
ART UNIT 3623		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/628,565

Applicant(s)

SCHULZ ET AL.

Examiner

Neil R. Kardos

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This is a **FINAL** Office action on the merits.
Claims 1, 4, 16, and 31 have been amended.
Currently, claims 1-37 are pending and have been examined.

Remarks

2. Claim Objections
Applicant's amendments to claim 4 are sufficient to overcome the claim objections set forth in the previous office action.
3. Rejections under 35 U.S.C. §§ 102-103
Applicant's amendments to claims 1, 16, and 31 are sufficient to overcome the prior art rejections set forth in the previous office action. These amendments necessitate addition of the new prior art references disclosed below.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. **Claims 1, 3-5, 9-12, 15-16, 18-20, 24-27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent number 5,630,069 to Flores et al ("Flores") in view**

of Van Der Aalst, Wil M.P., “Process-Oriented Architectures for Electronic Commerce and Interorganizational Workflow”, *Information Systems* Vol. 24, No. 8, pp 639-671, 1999 (hereinafter “Aalst”).

Claims 1 & 16: Flores discloses a workflow model and method comprising:

- a first workflow associated with a first party (see figure 2; column 7, line 60 through column 8, line 5, disclosing different roles for each workflow);
- a first workflow view representing an abstracted first workflow (see column 7, lines 19-22, disclosing viewing a workflow map on a computer screen);
- a second workflow associated with a second party (see figure 2; column 7, line 60 through column 8, line 5, disclosing different roles for each workflow);
- a second workflow view representing an abstracted second workflow (see column 7, lines 19-22, disclosing viewing a workflow map on a computer screen);
- a coalition workflow view referencing the first workflow view and the second workflow view to provide a collaborative workflow, the collaborative workflow specifying tasks that the first party and the second party are required to perform (see figure 2; column 7, lines 46-56; column 8, lines 41-44, disclosing linking workflows).

Flores does not explicitly disclose wherein the first and second workflow views express first and second virtual tasks as first and second vertices within a first and second matrix.

Aalst discloses these limitations (see at least pages 649-650: 5.1 “Definition of CT-IOWF, wherein workflow tasks T for different business partners B are expressed as tuples [matrices])

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the workflow methodology taught by Aalst in the workflow maps of Flores. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained from load balancing and reconfiguration of interorganizational workflow sharing (see Aalst: pages 649-650).

Claims 3 and 18: Flores discloses wherein the first workflow view comprises a first virtual task and a second virtual task corresponding to a first actual task and a second actual task, respectively, of the first workflow (see column 7, lines 19-22, disclosing viewing virtual workflow maps on a computer screen).

Claims 4 and 19: Flores discloses wherein the first virtual task corresponds to a first plurality of actual tasks of the first workflow, and the second virtual task corresponds to a second plurality of tasks of the second workflow (see column 8, lines 25-35, disclosing a workflow that represents a collection of workflows rather than a single workflow).

Claims 5 and 20: Flores discloses a first set of dependencies between the first virtual task and the first plurality of actual tasks, and a second set of dependencies between the second virtual task and the second plurality of actual tasks, wherein the first and second set of dependencies are selected so as to maintain an order of operation of the first plurality of actual tasks relative to the second plurality of actual tasks (see table 1; column 8, line 45 through column 10, line 33, disclosing triggering an action based on a workflow condition).

Claims 9 and 24: Flores discloses wherein the second workflow view comprises a third virtual task and a fourth virtual task corresponding to a third actual task and a fourth actual task,

respectively, of the second workflow (see column 7, lines 19-22, disclosing viewing virtual workflow maps on a computer screen).

Claims 10 and 25: Flores discloses wherein the tasks within the coalition workflow comprise the first virtual task, the second virtual task, the third virtual task, and the fourth virtual task (see column 8, lines 25-35, disclosing a business process workflow that consists of a collection of linked workflows).

Claims 11 and 26: Flores discloses wherein the tasks within the collaborative workflow further comprise a synchronizing task operable to preserve an order of execution of the first virtual task, the second virtual task, the third virtual task, and the fourth virtual task (see table 1; column 8, line 45 through column 10, line 33, disclosing triggering an action based on a workflow condition).

Claims 12 and 27: Flores discloses wherein the synchronizing task relates a finished execution state of the second virtual task to a beginning execution state of the third virtual task (see table 1; column 8, line 45 through column 10, line 33, disclosing triggering an action based on a workflow condition).

Claims 15 and 30: Flores discloses a third workflow view corresponding to a second abstraction of the first workflow and constructed for forming a second coalition workflow view referencing the third workflow view and a third workflow associated with a third party, to thereby provide a second collaborative workflow associated with the first party and the third party (see figure 2; column 7, line 60 through column 8, line 5, disclosing different roles for each workflow; column 7, lines 19-22, disclosing viewing a workflow map on a computer screen; column 7, lines 46-56 and column 8, lines 41-44, disclosing linking workflows).

6. **Claims 2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores in view of Aalst, and further in view of U.S. Patent number 7,184,966 to Parsonnet et al (“Parsonnet”).**

Claims 2 and 17: Flores does not explicitly disclose wherein the first workflow and the second workflow are private to the first and second parties, respectively.

Parsonnet teaches these limitations (see figure 2, items 216-217, 236, 237; column 8, lines 27-50, disclosing separate workflows for a customer and a vendor protected by a firewall).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Parsonnet with the invention of Flores. One of ordinary skill in the art would have been motivated to do so for security benefits gained by keeping information private.

7. **Claims 6-8, 13-14, 21-23, 28-29, and 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores in view of Aalst, and further in view of U.S. Patent number 5,826,020 to Randell (“Randell”).**

Claims 6 and 21: Flores does not explicitly disclose wherein a first virtual execution state of the first virtual task corresponds to a first actual execution state of the first plurality of actual tasks.

Randell teaches these limitations (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, disclosing executing the virtual workflow task once the actual task has been executed).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of ordinary skill in the art would have been motivated to do so in order to dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Claims 7 and 22: Flores does not explicitly disclose wherein an actual state transition of the first actual execution state is reflected in a virtual state transition of the first virtual execution state.

Randell teaches these limitations (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, disclosing executing the virtual workflow task once the actual task has been executed).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of ordinary skill in the art would have been motivated to do so in order to dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Claims 8 and 23: Flores does not explicitly disclose wherein a message from the second party concerning the first virtual task is forwarded to an active task within the first plurality of actual tasks via the first virtual task, based on the first actual execution state.

Randell teaches these limitations (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, disclosing sending an information packet to an agent assigned to perform a task upon completion of a previous task).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of

ordinary skill in the art would have been motivated to do so in order to dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Claims 13 and 28: Flores does not explicitly disclose wherein the collaborative workflow is implemented by communications between the first party and the second party regarding the first workflow view and the second workflow view.

Randell teaches these limitations (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, teaching sending an information packet to an agent after another agent has completed a task; column 4, lines 13-27, disclosing different agents responsible for different tasks/workflows; see also column 2, lines 1-5, disclosing sending information between agents via e-mail).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of ordinary skill in the art would have been motivated to do so in order to dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Claims 14 and 29: Flores does not explicitly disclose wherein the collaborative workflow is implemented by a third-party mediator facilitating communications between the first party and the second party.

Randell teaches these limitations (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, teaching sending an information packet to an agent after another agent has completed a task, wherein the computer system is the third-party mediator; column 4, lines 13-27, disclosing different agents responsible for different tasks/workflows).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of ordinary skill in the art would have been motivated to do so in order to dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Claim 31: Flores discloses a system comprising:

- a first workflow modeler operable to model a first workflow associated with a first party (see column 7, line 9 through column 14, line 31, disclosing a workflow modeler);
- a first view modeler operable to model a first virtual workflow as an abstracted first workflow (see column 7, line 9 through column 14, line 31, disclosing a workflow modeler; see column 7, lines 19-22, disclosing viewing an editable workflow map on a computer screen).

Flores does not explicitly disclose wherein the first view modeler expresses virtual tasks of the first workflow as first vertices within a first matrix of a first workflow view.

Aalst discloses these limitations (see at least pages 649-650: 5.1 “Definition of CT-IOWF, wherein workflow tasks T for different business partners B are expressed as tuples [matrices])

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the workflow methodology taught by Aalst in the workflow maps of Flores. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained from load balancing and reconfiguration of interorganizational workflow sharing (see Aalst: pages 649-650).

Flores also does not explicitly disclose a workflow engine operable to execute the first workflow and to virtually execute the first virtual workflow in conjunction with a second workflow associated with a second party.

Randell teaches this limitation (see figure 10, teaching the workflow engine).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell in the workflow modeler of Flores. One of ordinary skill in the art would have been motivated to do so in order to automate procedures that must be carried out according to defined rules among participants (see Randell, column 3, lines 57-59).

Claim 32: Flores discloses wherein the second virtual workflow is an abstraction of the second workflow (see column 7, lines 40-46).

Flores does not explicitly disclose wherein the workflow engine is operable to execute the first virtual workflow in conjunction with a second virtual workflow.

Randell teaches this limitation (see figure 10, teaching the workflow engine; see column 4, lines 13-27, disclosing different agents responsible for different tasks/workflows; see column 7, lines 41-46, disclosing representing workflows as abstractions).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow modeler of Flores. One of ordinary skill in the art would have been motivated to do so in order to automate procedures that must be carried out according to defined rules among participants (see Randell, column 3, lines 57-59).

Claim 33: Flores discloses wherein the first virtual workflow comprises a first virtual task associated with a first task and a second task of the first workflow (see column 8, lines 25-35, disclosing a workflow that represents a collection of workflows rather than a single workflow).

Flores does not disclose wherein the workflow engine is operable to associate a virtual execution state of the first virtual task with a first execution state of the first task and a second execution state of the second task.

Randell teaches this limitation (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, disclosing executing the virtual workflow task once the actual task has been executed).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of ordinary skill in the art would have been motivated to do so in order to dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Claim 34: Flores discloses a monitor operable to track the virtual execution state, the first execution state, and the second execution state (see column 8, line 45 through column 10, line 33; table 1, disclosing tracking the state of a task).

Claim 35: Flores discloses a database for storing the first workflow, instances of the first workflow, the first virtual workflow, and instances of the first virtual workflow (see column 4, lines 53-64).

Claim 36: Flores does not explicitly disclose a gateway operable to route messages to and from the second party and the workflow engine, the messages concerning the first virtual workflow and the second workflow.

Randell teaches these limitations (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, teaching sending an information packet to an agent after another agent has completed a task, wherein the computer system is the third-party mediator; column 4, lines 13-27, disclosing different agents responsible for different tasks/workflows).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of ordinary skill in the art would have been motivated to do so in order to dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Claim 37: Flores discloses a mediator operable to mediate interactions between the first virtual workflow and the second workflow, the mediator comprising:

- a database operable to store the first virtual workflow, the second workflow, instances of the first virtual workflow, and instances of the second workflow (see column 4, lines 53-64); and
- a monitor operable to track execution states of the first virtual workflow and the second workflow (see column 8, line 45 through column 10, line 33; table 1, disclosing tracking the state of a task).

Flores does not explicitly disclose a security manager operable to receive messages regarding the first virtual workflow for decryption.

Randell teaches this limitation (see figure 10, items 1010-1012; figure 12; column 12, lines 35-44; column 13, line 40 through column 14, line 2, teaching sending an information packet to an agent after another agent has completed a task, wherein the computer system is the security manager).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Randell with the workflow model of Flores. One of ordinary skill in the art would have been motivated to do so in order to pass the message on and dispatch a task to an agent in order to perform work (see Randell, column 12, lines 35-38).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- U.S. patent number 6,073,109 to Flores et al, directed to managing business processes using linked workflows
- U.S. patent number 6,349,238 to Gabbita et al, directed to managing workflow among a variety of organizations within a telecommunications company
- U.S. patent number 7,039,597 to Notani et al, directed to managing collaboration within and between enterprises
- U.S. patent number 6,920,456 to Lee et al, directed to maintaining and updating workflow information stored in a database

- U.S. patent number 6,052,684 to Du, directed to consistent execution of workflow processes in a workflow management system.
- U.S. patent number 6,041,306 to Du et al, directed to performing flexible workflow process execution in a distributed workflow management system.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 3623

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil R. Kardos
Examiner
Art Unit 3623

nrk
5/14/08

/Romain Jeanty/
Primary Examiner, Art Unit 3623